

Dean K. Matsuura Manager Regulatory Affairs

August 20, 2009

2009 AUG 20 P 4: 13

The Honorable Chairman and Members of the Hawaii Public Utilities Commission Kekuanaoa Building, First Floor 465 South King Street Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 2008-0083 – Hawaiian Electric 2009 Test Year Rate Case Hawaiian Electric's Responses to PUC IRs 102 to 105

Enclosed for filing are Hawaiian Electric Company, Inc.'s ("Hawaiian Electric") responses to the information requests ("IRs") issued by the Commission to Hawaiian Electric on July 31, 2009, which include PUC IRs 102 to 105.

Very truly yours,

Dean K. Matsuura

Manager, Regulatory Affairs

Enclosures

cc: Division of Consumer Advocacy
Michael L. Brosch, Utilitech, Inc.
Joseph A. Herz, Sawvel & Associates, Inc.
Dr. Kay Davoodi, Department of Defense
James N. McCormick, Department of Defense
Theodore E. Vestal, Department of Defense
Ralph Smith, Larkin & Associates

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PUC-IR-102

Schedule E

References: (1) Interim Decision and Order dated July 2, 2009, Docket No. 2008-0083 ("Interim Decision and Order"), Part II.2(b) Employee Electricity Rate Discount, at 11; and (2) Revised Schedules Resulting from Interim Decision and Order dated July 8,2009, Exhibit 3, at 10 ("Revised Schedules").

In the Interim Decision and Order, the Commission states in part:

The commission is concerned with the justness and reasonableness of electricity discounts for HECO employees and former employees during these times of economic crisis and the critical need to incentivize energy conservation. The proposed Schedule E on page 24 of Exhibit HECO-106 provides full-time HECO employees and former employees with electricity rates that are two-thirds of the effective Schedule R rate for the first 825 kWh of consumption in each month. Such rates may be unduly discriminatory and under-allocate electricity costs to HECO employees and former employees. For purpose of interim rates, the commission directs HECO to remove Schedule E and adjust other rates based on this change (emphasis added).

For the docket record, please (1) confirm whether Schedule R customers were subsidizing Schedule E customers in the past prior to the issuance of the Interim Decision and Order and that, as a result of the removal of Schedule E, Schedule R revenues at current effective rates have been increased by \$1,066,900 as indicated by HECO in the Revised Schedules; and (2) show how Schedule R rates and other rate schedules will be adjusted accordingly as a result of the removal of Schedule E.

HECO Response:

Yes, in the current base rate design (HECO test year 2005 rates, effective June 20, 2008)

Schedule E customers are subsidized by Schedule R customers and by all other rate schedule customers. The discount amount for Schedule E customers is allocated in final rate design to all rate schedules. The removal of the Schedule E discount from the estimate of revenues at current effective rates increases Schedule R revenues by \$1,066,900, as shown in HECO T-3

Attachment 4 of Hawaiian Electric's revised schedules, filed July 8, 2009 in response to the Interim Decision and Order. The amount of interim rate increase allocation to Schedule R and to

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other rate schedules is lower by \$1,066,900 due to the removal of the Schedule E discount, as shown in Exhibit 2A, page 3, of Hawaiian Electric's revised schedules in response to the Interim Decision and Order.

PUC-IR-103

Cost Allocation

References: (1) Revised Schedules Resulting from Interim Decision and Order dated July 8, 2009, Exhibit 2A, at 3; and (2) Stipulated Settlement Letter dated May 15, 2009, Docket No. 2008-0083, Exhibit 1, at 84-85.

As indicated in the referenced Stipulated Settlement Letter, the parties agreed to allocate any interim increase in electric revenues to the existing rate classes in the following percentages:

Schedule R	35.74%
Schedule G	4.37%
Schedule J	33.86%
Schedule H	0.55%
Schedule PS	8.64%
Schedule PP	15.17%
Schedule PT	1.03%
Schedule F	0.64%

The parties also agreed to allocate any final increase in electric revenues to the proposed rate classes in the following percentages:

Schedule R	35.74%
Schedule G	4.48%
Schedule J	34.22%
Schedule PS	7.06%
Schedule PP	17.86%
Schedule F	0.64%

For the docket record, please (1) provide the basis other than for settlement purposes for the above interim rate increase allocation; (2) explain why the allocation for the interim rate increase is just and reasonable; (3) provide the basis other than for settlement purposes for the above final rate increase allocation; and (4) explain why the allocation for the final rate increase is just and reasonable.

HECO Response:

The basis for the settlement proposed allocation of final increase in electric revenues to the proposed rate classes considered the positions of Hawaiian Electric, the Division of Consumer Advocacy, and the Department of Defense on cost of service and movement of inter-class

revenues towards the respective cost of service positions. Hawaiian Electric had proposed to allocate the increase in revenues as an equal percentage increase to current effective revenues at all rate schedules (HECO T-1, page 20). The Division of Consumer Advocacy supported an equal percentage distribution of any revenue increase in this docket (CA-T-5, page 34). The Department of Defense argued that an across-the-board increase is not appropriate because it will not move rates closer to cost and, in fact, would exacerbate existing subsidies (DOD-300, page 20). In HECO ST-22, Attachment 1, page 1, the proposed revenue allocation to classes. based on the Settlement Agreement percentages, and the class rates of return and rate of return index at proposed rates are presented for the cost of service scenario based on the minimum system study. For all rate classes, the rate of return index at proposed rates has moved higher or lower towards 100% from the rate of return index at current effective rates. This is accomplished by assigning a revenue percentage increase to Schedule R. Schedule J. and Schedule F that is higher than the Company total percentage increase, since these classes had rate of return index values at current effective rates of less than 100%. The revenue percentage increase assigned to Schedule G, Schedule DS, and Schedule P is lower than the Company total percentage increase, since these classes had rate of return index values at current effective rates of greater than 100%. In addition, the smallest revenue percentage increase assigned (to Schedule DS) is about 50% of the Company total percentage increase, while the largest revenue percentage increase assigned (to Schedule J) is about 125% of the Company total percentage increase, which demonstrates that the proposed class revenue increases, while spread differently to different classes, are not extreme. The proposed revenue allocation to proposed rate classes that is presented in the Settlement Agreement is reasonable. The proposed final revenue

allocation balances the impact to customer classes while moving each class's revenues closer to its proposed cost of service (HECO ST-22, pages 3-4).

The proposed settlement allocation of the interim rate increase in electric revenues to the existing rate classes, which the Commission approved in its Order Approving HECO's Revised Schedules filed August 3, 2009 in this docket, is based on the above settlement proposed allocation of final increase, but is adjusted to reflect the current rate schedules. In the proposed final rates. Schedule H is eliminated and its customers are distributed to Schedule G and Schedule J: Proposed Schedule DS is formed from Schedule PP customers directly served from a substation plus the Schedule PT customers; and proposed Schedule P is formed from the combination of the remaining Schedule PP customers plus the Schedule PS customers. The proposed settlement allocation of interim rate increase extracts and separately identifies the allocations to existing Schedule H, PS, PP, and PT customers. In addition, in order to further reflect the proposed final allocation to proposed Schedule DS customers, the settlement agreement limits the increase to Schedule PP customers who are directly served from a substation to 50% of the overall revenue percentage increase that the interim increase represents. Since the proposed interim increase allocation is based on the final revenue allocation, which balances the impact to customer classes while moving each class' revenues closer to its proposed cost of service, it is reasonable as well.

PUC-IR-104

Time-of-Use (TOU)

References: (1) HECO 2009 Test Year, Direct Testimonies and Exhibits, Docket No. 2008-0083, HECO T-22, at 42; (2) Stipulated Settlement Letter dated May 15, 2009, Docket No. 2008-0083, HECO T-22, Attachment 2, Final Settlement, at 3; and (3) Interim Decision and Order dated July 2, 2009, Docket No. 2008-0083.

For the docket record, please provide (1) an average daily system demand profile for each month for the most recent 12 consecutive months; (2) the basis for the proposed on-peak and off-peak periods for Schedule TOU-R in comparison to the average daily system demand profiles; (3) an explanation as to why the proposed on-peak and off-peak periods for Schedule TOU-R are more reasonable than the current TOU-R three rating periods; (4) the new TOU-R charges for the proposed on-peak and off-peak periods as pertinent to the Commission's Interim Decision and Order dated July 2, 2009; (5) the basis, along with workpapers showing calculations, for the new TOU-R charges other than to incent customers to shift their electric consumption load from on-peak period to off-peak period; (6) reasonable recommended guidelines, along with any supporting research material, on what customers may do to shift their electric consumption away from on-peak period to off-peak period; and (7) an explanation as to why the new TOU-R charges are just, reasonable and in the public interest.

HECO Response:

- 1. See Attachment 1 to this response for the 2008 net hourly average system load, by month, by hour.
- 2. The proposed Schedule TOU-R on-peak periods of 3pm to 8pm daily include the hours of highest system demand.
- 3. The proposed Schedule TOU-R on-peak periods are designed to capture the majority of the evening peak hour usage while leaving some hours to the off-peak where people are normally awake, in order to allow customers to shift energy uses to the off-peak hours (HECO T-22, page 43). The on-peak and off-peak periods for the proposed Schedule TOU-R are more usable, and therefore more reasonable.

- 4. The proposed Schedule TOU-R will not take effect until approved by the Commission in a final decision and order in this case. The Commission's approval of an interim rate increase in this docket applies a percentage increase to the charges shown in the existing Schedule TOU-R (with three rating periods) that was effective June 20, 2008.
- 5. The proposed Schedule TOU-R rate option is designed to give customers an opportunity to lower their electric bill by shifting consumption to off-peak periods. The proposed Schedule TOU-R rates are designed with the intent that customers can reduce their electric bills to below what they would have paid under Schedule R only if they modify their electricity consumption patterns. The Company used time-of-use kWh data for Schedule R customers from the 2003 class load study to design the proposed Schedule TOU-R rates. A summary of the rate design calculations is provided in Attachment 2 to this response.
- 6. In the April 2009 issue of the bill insert, Consumer Lines, the Company identifies the sources of significant energy use. A copy of that article is provided in Attachment 3 to this response. Schedule TOU-R customers can manage their electric bill by managing the level of these identified energy uses during the on-peak period. In terms of specific examples, Schedule TOU-R customers can shift their electricity usage from the on-peak period to the off-peak period by putting a timer on their electric resistance water heater and by delaying other uses of hot water (washing dishes, washing clothes, bathing) to after 8pm.
- 7. The proposed Schedule TOU-R rate is reasonable because it gives customers a more usable opportunity to save on their electric bill if they can shift their electricity usage, while limiting the opportunity for savings for those customers who do not alter their electricity consumption patterns.

PUC-IR-104.a. Average hourly loads from calendar year 2008, in Net MW

Hour Ending:

-	1 AM	2	3	4	5	6	7	8	9	10	11	12 Noon
January -	630.5	598.3	581.5	587.6	634.1	723.7	814.3	853.9	917.5	958.8	976.7	982.1
February	637.7	606.1	589.2	596.1	644.5	739.4	835.0	876.2	941.5	980.5	996.9	1003.1
March	659.1	626.9	611.0	615.1	658.3	745.5	827.7	894.7	963.2	1002.1	1020.4	1027.9
April	653.0	623.2	608.5	614.0	657.9	756.4	848.0	908.0	966.6	1000.8	1015.9	1022.3
May	677.4	645.0	628.8	633.4	675.5	761.0	856.2	926.9	985.5	1024.0	1042.2	1048.4
June	698.8	663.6	646.1	648.6	687.7	759.0	851.5	933.5	999.0	1041.9	1063.9	1072.2
July	720.5	683.8	665.3	668.6	706.1	777.6	868.2	951.6	1022.2	1069.0	1093.6	1103.1
August	717.3	683.0	665.5	668.3	707.0	791.1	878.9	953.1	1020.8	1064.4	1087.8	1097.9
September	699.8	667.9	652.4	657.2	698.8	791.6	879.5	949.9	1016.1	1060.1	1082.3	1093.0
October	690.8	660.2	645.2	650.6	692.8	786.8	873.7	937.8	1001.3	1040.6	1061.9	1070.3
November	669.1	638.1	622.9	627.9	667.1	744.8	833.4	892.3	961.1	1000.3	1019.7	1027.7
December	637.5	605.7	593.0	601.0	646.0	735.2	826.4	875.2	940.9	983.2	998.0	1003.3
_												
_	1 PM	2	3	4	5	6	7	8	9	10	11	12 Mid.
January	1 PM 982.9	2 976.8	973.1	970.5	970.5	6 998.2	7 1049.2	8 1000.0	9 944.3	10 869.4	11 770.7	12 Mid. 682.6
January February		976.8 1002.7			970.5 996.9			1000.0 1021.2		869.4 886.1	770.7 784.1	
-	982.9	976.8	973.1	970.5	970.5	998.2	1049.2	1000.0	944.3	869.4	770.7	682.6
February	982.9 1006.1	976.8 1002.7	973.1 1000.6	970.5 1000.5	970.5 996.9	998.2 1009.2	1049.2 1060.0	1000.0 1021.2	944.3 964.9	869.4 886.1	770.7 784.1	682.6 695.0
February March	982.9 1006.1 1031.7	976.8 1002.7 1029.6	973.1 1000.6 1025.8	970.5 1000.5 1024.4	970.5 996.9 1019.5	998.2 1009.2 1019.8	1049.2 1060.0 1058.6	1000.0 1021.2 1034.3	944.3 964.9 978.1	869.4 886.1 903.4	770.7 784.1 802.9	682.6 695.0 714.1
February March April	982.9 1006.1 1031.7 1026.1	976.8 1002.7 1029.6 1022.8	973.1 1000.6 1025.8 1021.2	970.5 1000.5 1024.4 1018.8	970.5 996.9 1019.5 1013.1	998.2 1009.2 1019.8 1013.2	1049.2 1060.0 1058.6 1039.3	1000.0 1021.2 1034.3 1033.6	944.3 964.9 978.1 977.8	869.4 886.1 903.4 896.5	770.7 784.1 802.9 794.4	682.6 695.0 714.1 706.7
February March April May	982.9 1006.1 1031.7 1026.1 1051.7	976.8 1002.7 1029.6 1022.8 1051.8	973.1 1000.6 1025.8 1021.2 1051.9	970.5 1000.5 1024.4 1018.8 1049.5	970.5 996.9 1019.5 1013.1 1038.9	998.2 1009.2 1019.8 1013.2 1031.3	1049.2 1060.0 1058.6 1039.3 1032.0	1000.0 1021.2 1034.3 1033.6 1045.4	944.3 964.9 978.1 977.8 995.8	869.4 886.1 903.4 896.5 921.4	770.7 784.1 802.9 794.4 821.8	682.6 695.0 714.1 706.7 732.9
February March April May June	982.9 1006.1 1031.7 1026.1 1051.7 1077.2	976.8 1002.7 1029.6 1022.8 1051.8 1077.2	973.1 1000.6 1025.8 1021.2 1051.9 1075.9	970.5 1000.5 1024.4 1018.8 1049.5 1072.8	970.5 996.9 1019.5 1013.1 1038.9 1060.6	998.2 1009.2 1019.8 1013.2 1031.3 1045.7	1049.2 1060.0 1058.6 1039.3 1032.0 1033.2	1000.0 1021.2 1034.3 1033.6 1045.4 1060.4	944.3 964.9 978.1 977.8 995.8 1016.7	869.4 886.1 903.4 896.5 921.4 943.6	770.7 784.1 802.9 794.4 821.8 845.8	682.6 695.0 714.1 706.7 732.9 757.5
February March April May June July	982.9 1006.1 1031.7 1026.1 1051.7 1077.2 1106.0	976.8 1002.7 1029.6 1022.8 1051.8 1077.2 1105.6	973.1 1000.6 1025.8 1021.2 1051.9 1075.9 1104.1	970.5 1000.5 1024.4 1018.8 1049.5 1072.8 1101.7	970.5 996.9 1019.5 1013.1 1038.9 1060.6 1088.4	998.2 1009.2 1019.8 1013.2 1031.3 1045.7 1070.5	1049.2 1060.0 1058.6 1039.3 1032.0 1033.2 1054.9	1000.0 1021.2 1034.3 1033.6 1045.4 1060.4 1080.6	944.3 964.9 978.1 977.8 995.8 1016.7 1036.6	869.4 886.1 903.4 896.5 921.4 943.6 966.1	770.7 784.1 802.9 794.4 821.8 845.8 868.9	682.6 695.0 714.1 706.7 732.9 757.5 778.7
February March April May June July August	982.9 1006.1 1031.7 1026.1 1051.7 1077.2 1106.0 1105.5	976.8 1002.7 1029.6 1022.8 1051.8 1077.2 1105.6 1105.2	973.1 1000.6 1025.8 1021.2 1051.9 1075.9 1104.1 1104.6	970.5 1000.5 1024.4 1018.8 1049.5 1072.8 1101.7 1101.4	970.5 996.9 1019.5 1013.1 1038.9 1060.6 1088.4 1088.4	998.2 1009.2 1019.8 1013.2 1031.3 1045.7 1070.5 1070.8	1049.2 1060.0 1058.6 1039.3 1032.0 1033.2 1054.9 1069.4	1000.0 1021.2 1034.3 1033.6 1045.4 1060.4 1080.6 1085.2	944.3 964.9 978.1 977.8 995.8 1016.7 1036.6 1034.6	869.4 886.1 903.4 896.5 921.4 943.6 966.1 959.5	770.7 784.1 802.9 794.4 821.8 845.8 868.9 863.4	682.6 695.0 714.1 706.7 732.9 757.5 778.7 775.3
February March April May June July August September	982.9 1006.1 1031.7 1026.1 1051.7 1077.2 1106.0 1105.5 1097.4	976.8 1002.7 1029.6 1022.8 1051.8 1077.2 1105.6 1105.2	973.1 1000.6 1025.8 1021.2 1051.9 1075.9 1104.1 1104.6 1092.5	970.5 1000.5 1024.4 1018.8 1049.5 1072.8 1101.7 1101.4 1089.1	970.5 996.9 1019.5 1013.1 1038.9 1060.6 1088.4 1088.4 1077.5	998.2 1009.2 1019.8 1013.2 1031.3 1045.7 1070.5 1070.8 1065.3	1049.2 1060.0 1058.6 1039.3 1032.0 1033.2 1054.9 1069.4 1106.0	1000.0 1021.2 1034.3 1033.6 1045.4 1060.4 1080.6 1085.2 1076.7	944.3 964.9 978.1 977.8 995.8 1016.7 1036.6 1034.6 1018.4	869.4 886.1 903.4 896.5 921.4 943.6 966.1 959.5 935.0	770.7 784.1 802.9 794.4 821.8 845.8 868.9 863.4 838.0	682.6 695.0 714.1 706.7 732.9 757.5 778.7 775.3 752.3
February March April May June July August September October	982.9 1006.1 1031.7 1026.1 1051.7 1077.2 1106.0 1105.5 1097.4 1076.2	976.8 1002.7 1029.6 1022.8 1051.8 1077.2 1105.6 1105.2 1096.0 1075.5	973.1 1000.6 1025.8 1021.2 1051.9 1075.9 1104.1 1104.6 1092.5 1070.4	970.5 1000.5 1024.4 1018.8 1049.5 1072.8 1101.7 1101.4 1089.1 1065.2	970.5 996.9 1019.5 1013.1 1038.9 1060.6 1088.4 1077.5 1053.4	998.2 1009.2 1019.8 1013.2 1031.3 1045.7 1070.5 1070.8 1065.3 1062.4	1049.2 1060.0 1058.6 1039.3 1032.0 1033.2 1054.9 1069.4 1106.0 1095.7	1000.0 1021.2 1034.3 1033.6 1045.4 1060.4 1080.6 1085.2 1076.7 1046.7	944.3 964.9 978.1 977.8 995.8 1016.7 1036.6 1034.6 1018.4 992.9	869.4 886.1 903.4 896.5 921.4 943.6 966.1 959.5 935.0 916.8	770.7 784.1 802.9 794.4 821.8 845.8 868.9 863.4 838.0 824.4	682.6 695.0 714.1 706.7 732.9 757.5 778.7 775.3 752.3 743.2

Summary Comparison of HECO Proposed Schedule R versus Proposed Schedule TOU-R based on 2003 Class Load Study Data ON-PEAK 3PM - 8PM, DAILY (5 HRS)

	ā	Total Bill (Total Bill (\$) Total Differen			ge Bill (\$)	Average Difference (\$) 🐼 Average Difference (%)	
	i i	@Prop	TOU-R Pro	p TOU-R		@Prop TOU-R	Prop TOU-R	Prop TOU-R	% Free-
Month	<u> N</u>	@Prop R @New	TOU les	s Prop R 🧸 (@Prop R	@New TOU	less Prop R	// less Prop R	Riders
(A)	(B)	[C] ((E)=(D-C) (F)=(C/B)	(G)≈(D/B)	(H)=(G-F)	(I)=(H/F)	(J)
Jan-03	69	\$16,094.86 \$1	7,130.64	\$1,035.78	\$233.26	\$248.27	\$15.01	6.44%	1%
Feb-03	69	\$14,136.45 \$1	5,010.53	\$874.08	\$204.88	\$217.54	\$12.67	6.18%	3%
Mar-03	69	\$15,930.30 \$1	6,895.10	\$964.80	\$230.87	\$244.86	\$13.98	6.06%	3%
Apr-03	69	\$15,620.92 \$1	6,534.19	\$913.27	\$226.39	\$239.63	\$13.24	5.85%	3%
May-03	69	\$16,593.80 \$1	7,536.64	\$942.84	\$240.49	\$254.15	\$13.66	5.68%	1%
Jun-03	69	\$17,199.37 \$1	8,149.20	\$949.83	\$249.27	\$263.03	\$13.77	3 5.52%	6%
Jul-03	69	\$18,960.65 \$2	20,002.53	\$1,041.88	\$274.79	\$289.89	\$15.10	5.49%	4%
Aug-03	69	\$18,129.35 \$1	9,118.06	\$988.71	\$262.74	\$277.07	\$14.33	5.45%	3%
Sep-03	69	\$16,941.53 \$1	7,974.98	\$1,033.45	\$245.53	\$260.51	\$14.98	6.10%	1%
Oct-03	69	\$17,850.60 \$1	8,969.43	\$1,118.83	\$258.70	\$274.92	\$16.21	6.27%	3%
Nov-03	69	\$16,150.62 \$1°	7,162.77	\$1,012.15	\$234.07	\$248.74	\$14.67	6.27%	1%
Dec-03	69	\$16,722.55 \$1	7,832.94	\$1,110.39	\$242.36	\$258.45	\$16.09	6.64%	3%
Total	8	\$200,331.00 \$21	2,317.01	\$11,986.01	\$2,903.35	\$3,077.06			
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Average				\$998.83	\$241.95	\$256.42	\$14.48	6.00%	3%
Max				\$1,118.83	\$274.79	\$289.89	\$16.21	6.64%	6%
Min	3			\$874.08	\$204.88	\$217.54	§ \$12.67	5.45%	1%

Notes: In total and on average, Schedule R customers who move to Schedule TOU-R will have higher bills on Schedule TOU-R than on Schedule R, as shown in columns E and H.

In order for customers to realize bill savings on Schedule TOU-R, they must modify their electricity consumption, for example, by shifting loads from on-peak to off-peak hours.

In this proposed rate design, there will be a small proportion of customers who are able to save on Schedule TOU-R without modifying consumption patterns, see Column J.

In order to entirely eliminate these so-called "Free-Riders," Schedule TOU-R rates would have to be even higher than the proposed levels.

Rates:

Proposed Sc	hedule R		Proposed TOU-R	
Customer Ch	arge,1 Ph	\$9.00	Customer Charge,1 Ph	\$10.50
Energy Char	ge, ¢		Energy Charge, ¢	
1ST 350	kWh	26.2113	_ ·	
NEXT 850	kWh	27.3648	On-Peak hours kWh	43.2113
> 1200	kWh	28.4968	Off-Peak hours kWh	22.2113
			Usage Charge, ¢	
			>350 kWh, per kWh	1.0000
			>1200 kWh, per kWh	2.0000

Where Your Electricity Goes

This bar chart shows typical annual energy use by a family of four. Your usage may differ depending on your household activities as well as the type, number and age of your appliances. However, this chart is a general guide showing where your electric dollars go.

Central Air Conditioning Room Air Conditioning Electric Hot Water Solar Hot Water Second Refrigerator Primary Refrigerator Miscellaneous and Lighting Horne Entertainment Equipment Television Electric Cooking Preezer Clothes Dryer Dishwasher kWh 500 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500

Annual Energy Use for Family of Four

Notes:

Air Conditioning – assumes if you're using central or split system air conditioning, the entire home is being cooled; whereas if you're using room air conditioning (window units) only individual rooms are being cooled.

Water Heating – energy use for both electric water heater and solar water are listed here to illustrate the difference in energy use. Solar water heaters that are well-designed and properly sized can reduce water heating costs by 80 to 90%.

Primary and Second Refrigerator – assumes that the primary refrigerator is a newer, more energy efficient model and the second refrigerator is older and less energy efficient.

Home Entertainment Equipment - includes large televisions, cable boxes, VCR/DVD players, stereos, game boxes, and computers and peripheral equipment.

Television - includes 36-inch or smaller color TVs.

PUC-IR-105

Rate Design - Proposed Rates

References: (1) HECO 2009 Test Year, Direct Testimonies and Exhibits, Docket No. 2008-0083, HECO T-22, at 26-47; (2) Stipulated Settlement Letter dated May 15, 2009, Docket No. 2008-0083, HECO T-22, Attachment 2, Final Settlement, at 1-3; (3) Interim Decision and Order dated July 2, 2009, Docket No. 2008-0083; and (4) Order (dated June 20, 2008) Granting Hawaiian Electric Company, Inc.'s Motion to Adjust Interim Increase Filed on May 21,2008, Docket No. 2006-0386.

For the docket record, please provide (1) revised rates for all rate schedules (i.e. rates/charges for all customer classes) resulting from the Commission's Interim Decision and Order dated July 2, 2009, in Docket No. 2008-0083, including but not limited to based fuel energy charge, non-fuel energy charge, etc.; and (2) revised rates for all rate schedules resulting from the Commission's Interim Decision and Order No. 23749 as modified by Order (dated June 20, 2008) Granting Hawaiian Electric Company, Inc.'s Motion to Adjust Interim Increase Filed on May 21, 2008, in Docket No. 2006-0386.

HECO Response:

Hawaiian Electric is providing the requested rate information in reverse chronological order, as attachments to this response. Items 1 and 4 were explicitly requested, while items 2 and 3 are being provided for completeness.

- Attachment 1 Interim Increase and discontinuance of Schedule E, effective August 3, 2009 in Docket No. 2008-0083.
- 2. Attachment 2 Interim Increase effective November 1, 2008 in Docket No. 2006-0386.
- 3. Attachment 3 Interim Increase effective October 1, 2008 in Docket No. 2006-0386.
- 4. Attachment 4 Interim Increase effective June 20, 2008 in Docket No. 2006-0386.

PUC-IR-105 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 1 OF 2

SHEET NO. 50.7 Effective August 3, 20009

INTERIM RATE INCREASE 2009

Supplement To

Schedule			Residential Service
Schedule	G	-	General Service Non-Demand
Schedule	J	_	General Service Demand
Schedule	Н	-	Commercial Cooking, Heating, Air
			Conditioning & Refrigeration Service
Schedule	PS	-	Large Power Secondary Voltage Service
Schedule	PP	-	Large Power Primary Voltage Service
Schedule	PT	-	Large Power Transmission Voltage Service
Schedule	F	-	Public Street Lighting, Highway Lighting,
			& Park & Playground Floodlighting
Schedule	U	-	Time-of-Use Service
Schedule	TOU-R	_	Residential Time-of-Use Service
Schedule	TOU-C	-	Commercial Time-of-Use Service
Schedule	SS	-	Standby Service

All terms and provisions of Schedules R, G, J, H, PS, PP, PT, F, U, TOU-R, TOU-C, and SS are applicable except that the Interim Rate Increase described below shall be added to customer bills.

All base rate schedule discounts, surcharges, and all other adjustments will not apply to the Interim Rate Increase.

INTERIM RATE INCREASE 2009:

Schedule	R/TOU-R	5.83	percent
Schedule	G/TOU-C Non-Demand	3.59	percent
Schedule	J/TOU-C Demand	6.33	percent
Schedule	H	6.37	percent
Schedule	PS	4.20	percent
Schedule	PP	6.17	percent
Schedule	PP (Directly served from Substation).	1.00	percent
Schedule	PT	2.72	percent
Schedule	F		percent
Schedule	U	6.33	percent

The above Interim Rate Increase 2009 is based on an interim increase of \$61,098,000 approved by the Public Utilities Commission. The revenues collected through this Interim Rate Increase are subject to refund with interest upon a final decision and order.

HAWAIIAN ELECTRIC COMPANY, INC.

Docket No. 2008-0083 Order Approving HECO's Revised Schedules, Issued August 3, 2009. Transmittal Letter Dated August 3, 2009.

PUC-IR-105 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 2 OF 2

Superseding Revised Sheet No. 62 Effective June 1, 1996

REVISED SHEET NO. 62 Effective August 3, 2009

SCHEDULE "E"

Electric Service for Employees

Availability:

Effective August 3, 2009, Schedule E service is discontinued. Customers formerly served under Schedule E will be served under Schedule R, Residential Service.

HAWAIIAN ELECTRIC COMPANY, INC.

Docket No. 2008-0083 Order Approving HECO's Revised Schedules, Issued August 3, 2009. Transmittal Letter Dated August 3, 2009. Superseding Revised Sheet No. 50.4 Effective October 1, 2008

REVISED SHEET NO. 50.4 Effective November 1, 2008

INTERIM RATE INCREASE 2007

Supplement To

Schedule	R	-	Residential Service
Schedule	E	_	Electric Service For Employees
Schedule	G	_	General Service Non-Demand
Schedule	J	-	General Service Demand
Schedule	Н	_	Commercial Cooking, Heating, Air
			Conditioning & Refrigeration Service
Schedule	PS	_	Large Power Secondary Voltage Service
Schedule	PP	_	Large Power Primary Voltage Service
Schedule	PT	_	Large Power Transmission Voltage Service
Schedule	F	-	Public Street Lighting, Highway Lighting,
			& Park & Playground Floodlighting
Schedule	U	-	Time-of-Use Service
Schedule	TOU-R	_	Residential Time-of-Use Service
Schedule	TOU-C	_	Commercial Time-of-Use Service

All terms and provisions of Schedules "R", "E", "G", "J", "H", "PS", "PP", "PT", "F", "U", "TOU-R", and "TOU-C" are applicable except that the total base rate charges for each billing period shall be increased by the following Interim Rate Increase approved by the Public Utilities Commission. The total base rate charges for the current billing period shall include all base rate schedule charges, and base rate adjustments, excluding the Energy Cost Adjustment, the IRP Cost Recovery Adjustment, Residential DSM Adjustment, Commercial and Industrial DSM Adjustment, SolarSaver Adjustment, and Interim Surcharge.

INTERIM RATE INCREASE 2007:

Schedule	R/E/TOU-R	7.09 percent
Schedule	G/TOU-C Non-Demand	7.01 percent
Schedule	J/TOU-C Demand	5.93 percent
Schedule	H	7.21 percent
Schedule	PS	7.44 percent
Schedule	PP	7.58 percent
	PP (Directly served from Substation).	1.82 percent
Schedule	PT	6.54 percent
Schedule	F	7.19 percent
Schedule	U	5.93 percent

The above Interim Rate Increase 2007 is based on an interim increase of \$77,466,000 approved by the Public Utilities Commission. The revenues collected through this Interim Rate Increase are subject to refund with interest upon a final decision and order.

HAWAIIAN ELECTRIC COMPANY, INC.

Docket No. 2006-0386
Transmittal Letter dated September 30, 2008.

Superseding Revised Sheet No. 50.4 Effective June 20, 2008

REVISED SHEET NO. 50.4 Effective October 1, 2008

INTERIM RATE INCREASE 2007

Supplement To

Schedule	R	-	Residential Service
Schedule	E	-	Electric Service For Employees
Schedule	G	-	General Service Non-Demand
Schedule	J	-	General Service Demand
Schedule	Н	-	Commercial Cooking, Heating, Air
			Conditioning & Refrigeration Service
Schedule	PS	-	Large Power Secondary Voltage Service
Schedule	PP	-	Large Power Primary Voltage Service
Schedule	PT	-	Large Power Transmission Voltage Service
Schedule	F	-	Public Street Lighting, Highway Lighting,
			& Park & Playground Floodlighting
Schedule	U	-	Time-of-Use Service
Schedule	TOU-R	-	Residential Time-of-Use Service
Schedule	TOU-C	_	Commercial Time-of-Use Service

All terms and provisions of Schedules "R", "E", "G", "J", "H", "PS", "PP", "PT", "F", "U", "TOU-R", and "TOU-C" are applicable except that the total base rate charges for each billing period shall be increased by the following Interim Rate Increase approved by the Public Utilities Commission. The total base rate charges for the current billing period shall include all base rate schedule charges, and base rate adjustments, excluding the Energy Cost Adjustment, the IRP Cost Recovery Adjustment, Residential DSM Adjustment, Commercial and Industrial DSM Adjustment, SolarSaver Adjustment, and Interim Surcharge.

INTERIM RATE INCREASE 2007:

Schedule	R/E/TOU-R	6.96 percent
Schedule	G/TOU-C Non-Demand	6.89 percent
Schedule	J/TOU-C Demand	5.82 percent
Schedule	Н	7.08 percent
Schedule	PS	7.34 percent
Schedule	PP	7.48 percent
Schedule	PP (Directly served from Substation).	1.72 percent
Schedule	PT	6.45 percent
Schedule	F	7.06 percent
Schedule	Ü	5.82 percent

The above Interim Rate Increase 2007 is based on an interim increase of \$77,466,000 approved by the Public Utilities Commission. The revenues collected through this Interim Rate Increase are subject to refund with interest upon a final decision and order.

HAWAIIAN ELECTRIC COMPANY, INC.

Docket No. 2006-0386
Transmittal Letter dated September 30, 2008.

Superseding Revised Sheet No. 50.4 Effective October 26, 2007 REVISED SHEET NO. 50.4 Effective June 20, 2008

INTERIM RATE INCREASE 2007

Supplement To

Schedule R Schedule E Schedule G Schedule J	<u>-</u>	Residential Service Electric Service For Employees General Service Non-Demand General Service Demand
Schedule H		Commercial Cooking, Heating, Air
		Conditioning & Refrigeration Service
Schedule PS	_	Large Power Secondary Voltage Service
Schedule PP	-	Large Power Primary Voltage Service
Schedule PT	_	Large Power Transmission Voltage Service
Schedule F	-	Public Street Lighting, Highway Lighting,
		& Park & Playground Floodlighting
Schedule U	_	Time-of-Use Service
Schedule TOU-R	_	Residential Time-of-Use Service
Schedule TOU-C	-	Commercial Time-of-Use Service

All terms and provisions of Schedules "R", "E", "G", "J", "H", "PS", "PP", "PT", "F", "U", "TOU-R", and "TOU-C" are applicable except that the total base rate charges for each billing period shall be increased by the following Interim Rate Increase approved by the Public Utilities Commission. The total base rate charges for the current billing period shall include all base rate schedule charges, and base rate adjustments, excluding the Energy Cost Adjustment, the IRP Cost Recovery Adjustment, Residential DSM Adjustment, Commercial and Industrial DSM Adjustment, SolarSaver Adjustment, and Interim Surcharge.

INTERIM RATE INCREASE 2007:

Schedule R/E/TOU-R	7.12 percent
Schedule G/TOU-C Non-Demand	7.05 percent
Schedule J/TOU-C Demand	5.96 percent
Schedule H	7.24 percent
Schedule PS	7.47 percent
Schedule PP	7.61 percent
Schedule PP (Directly served from Substation).	1.84 percent
Schedule PT	6.56 percent
Schedule F	7.23 percent
Schedule U	5.96 percent

The above Interim Rate Increase 2007 is based on an interim increase of \$77,867,000 approved by the Public Utilities Commission in its Order granting a Motion to Adjust Interim Increase filed on May 21, 2008 in Docket No. 2006-0386. The revenues collected through this Interim Rate Increase are subject refund with interest in accordance with the Public Utilities Commission's Order Granting Motion to Adjust Interim Increase filed on May 21, 2008.

HAWAIIAN ELECTRIC COMPANY, INC.

Docket No. 2006-0386; Order Granting Motion to Adjust Interim Increase Filed on May 21, 2008. Transmittal Letter dated June 23, 2008.